

M A R C H 2 0 1 5



@ the Bradbury

Special Events & News



Museum to Host Pi Day of the Century Special Lecture

The mathematical constant π , sometimes written as Pi, is approximately equal to 3.14159. Each year, Pi Day is celebrated on March 14. This year, the occasion will be once-in-a-century because the first 10 digits of the infinite series will be perfectly aligned around 9:26 AM (i.e., 3/14/15 9:26:53).

The museum plans to celebrate this Pi Day of the Century with a dynamic lecture by Carrie Manore, Kyle Hickmann, and Sara Del Valle, three mathematicians from Los Alamos National Laboratory. In the talk, they will give a brief history of Pi, describe its importance in mathematics, discuss the role computers have played in calculating Pi and show its latest known digit. They will also explain the so-called “wagon wheel effect” that you see in old western films. You might have wondered why the stagecoach wheels appear to be moving backwards. Well, the answer is intimately tied to Pi and has important consequences in applications as far reaching as radar imaging, X-ray imaging, and even making a call on your cell phone. They will end the discussion by demonstrating how you can use current technology such as your iPhone to calculate Pi or search for your birthday among the first 200 million digits.

This special lecture will be held in the classroom space at **Time Out Pizzeria**, 1350 Central Avenue, Los Alamos (next to the museum) on **Saturday, March 14 from Noon to 1:00 PM**. Join us and perhaps enjoy a pizza ‘pi’ special to mark the occasion while you listen!

Save the Date!

MAR
8

Daylight Savings
Time Begins

MAR
14

Women in Science and
Special Pi Day Events

11:00 AM to 1:00 PM

- ✓ Scientists in the Spotlight
- ✓ FIRST Lego League Robotics Teams
- ✓ Pi Activities in TechLab
- ✓ Pi Day of the Century Special Lecture @ Time Out Pizzeria

MAR
17

St. Patrick's Day

MAR
19

Science On Tap

5:30 PM to 7:00 PM

@ UnQuarked Wine Room
145 Central Park Square
Los Alamos, New Mexico

MAR
21

Big Sky Learning

11:00 AM to 2:00 PM

Science fun for kids & teens

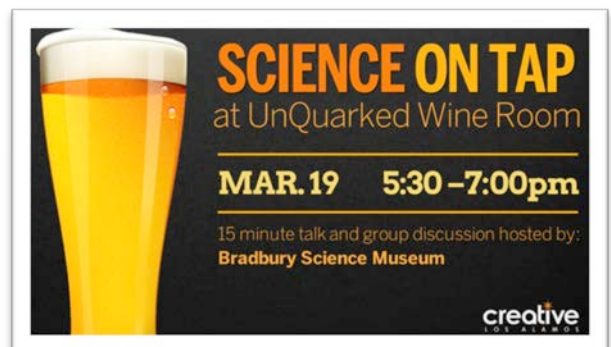
Join Us Every Second Saturday



Join us at the museum every second Saturday of the month for a program called *Scientist in the Spotlight* featuring Scientist Ambassadors that have recently been certified through the museum's Scientist Ambassador Academy program. In this activity, ambassadors will hang out on the museum floor for a couple hours initiating casual conversations with visitors about their favorite science, technology, engineering, or math (STEM) subject. **On Saturday, March 14 from 11:00 AM to 1:00 PM**, Nicole Jeffery will talk about sea ice, Chuck Mielke will talk on the subject of magnets and Teri Roberts will talk about the science of computer software and hardware. These conversations are intended for all ages and include interactive hands-on activities that make learning more fun. Be sure to tune in to KRSN AM 1490 on Friday, March 13 at 7:30 AM to get a preview of the event with Teri Roberts.

SCIENCE ON TAP

The next installment of "Science on Tap" will be held on **Thursday, March 19**, starting at 5:30 PM at the UnQuarked Wine Room at 145 Central Park Square in downtown Los Alamos. **Amanda Barry**, research scientist at Los Alamos National Laboratory, will discuss engineering microalgae for biofuel production. Concerns about high energy prices, finite fossil fuel reserves, rising atmospheric CO₂ levels, and energy security have put focus on microalgae as a renewable domestic fuel source. The optimization of microalgae for biomass and lipid production in a biofuel production pond environment would be highly desirable. In this talk, Barry will focus on the development of strain-specific molecular toolboxes in order to engineer algae for optimized biofuel production. This "Science On Tap" event is being co-sponsored by the American Chemical Society Central New Mexico Local Section and will include heavy hors d'oeuvres and wine for participants. To learn more about this and other science topics, join us every third Thursday of the month for "Science On Tap."



To subscribe to our monthly newsletter, visit the museum's website at:
www.lanl.gov/museum/events/events-mailing.shtml

Subscribe
to our
Newsletter

Pi Day of the Century at the Museum

Pi Day Activities March 14, 2015

- ✓ Attend a fun and fascinating **lecture** given by Laboratory mathematicians from **Noon to 1:00 PM at Time Out Pizzeria in Los Alamos** while enjoying a pizza 'pi';
- ✓ Interact with hands-on Pi-related **activities** throughout the museum **all day**;
- ✓ Speak to **Scientist Ambassadors** from **11:00 AM to 1:00 PM at the museum** about things like sea ice, computers, and magnets;
- ✓ Watch a live robotics **demonstration** from **11:00 AM to 1:00 PM at the museum** given by local FIRST LEGO League teams, a group of Los Alamos Girl Scouts.



Pi Day is an annual celebration commemorating the mathematical constant π , a never-ending, transcendental number representing the ratio of a circle's circumference to its diameter. It is observed on March 14 (3/14... get it?). Today, Pi is used for everything from calculating the size of planets outside of our solar system to figuring out how to get the most out of your money when ordering a pizza. To learn more about these applications of Pi, try exploring these web pages.

5 Ways NASA uses Pi: <http://www.jpl.nasa.gov/education/index.cfm?page=371>

Using Pi to Order Pizza: <http://www.avclub.com/article/heres-mathematical-proof-you-should-always-order-b-201629>



FUN FACT: The **Feynman point** is a sequence of six 9s that begins at the 762nd decimal place of the decimal representation of π . It is named after physicist Richard Feynman, who once stated during a lecture he would like to memorize the digits of π until that point, so he could recite them and quip "nine nine nine nine nine nine and so on", suggesting, in a tongue-in-cheek manner, that π is rational. By rational, he refers to the mathematical property of all fractions, no matter how weird, that eventually when expressed as decimals, their digits form an ever-repeating sequence. Pi cannot be expressed as a fraction of two integers (which is to say it is irrational), so it never repeats.

MUSEUM HOURS Admission is always *FREE*.

Sunday and Monday: 1:00 PM to 5:00 PM, Tuesday – Saturday: 10:00 AM to 5:00 PM

More **NEWS** and **EVENTS**

FIRST LEGO League Demonstration March 14 – 11:00 AM to 1:00 PM

- ✓ Watch a live demonstration of FIRST LEGO League team robots in action!
- ✓ Learn more about how the Los Alamos Girl Scouts assemble FIRST LEGO League teams to design, build, test, and program robots using LEGO Mindstorm® technology
- ✓ Hear about latest team challenges and competitions



Fun with Big Sky Learning March 21 – 11:00 AM to 2:00 PM

- ✓ Build your own Bug Bot—a small simple robot that shakes—and take it home for FREE!
- ✓ Learn to work with real tools using safe techniques
- ✓ Understand more about simple circuits during the building process
- ✓ Hear about Big Sky Learning's Los Alamos *Build It!* Summer Camp and school year offerings
- ✓ Learn about paid positions available for teen mentors and teachers.

Bye Bye, B83...

Robert Naranjo and Glen McDuff strap down the museum's B83 nuclear bomb model for its trip to Albuquerque, New Mexico where it will be on loan to the Defense Nuclear Weapons School at Kirtland Air Force Base. This model has been on display at the museum since 2002. The B83 is the nation's most powerful weapon in the U.S. arsenal. It was stockpiled in 1983 and has a yield in the megaton range. Its hollow, shock-absorbing steel nose has concentric rings to prevent the bomb from sliding or ricocheting on high-speed impact with concrete or steel targets.



Mark Your Calendars!

March 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
				Purim	A	
8	9	10	11	12	13	14
Daylight Savings Time Starts					A	Scientists in the Spotlight and FIRST Lego League Robotics Teams 11 AM to 1 PM -- Pi Day of the Century Lecture Noon to 1 PM
15	16	17	18	19	20	21
		St. Patrick's Day		Science on Tap @ UnQuarked Wine Room 5:30 to 7:00 PM	Spring Equinox B	Big Sky Learning 11 AM to 2 PM
22	23	24	25	26	27	28
					A	
29	30	31				
Palm Sunday					B	

*March is Women's History Month and the Bradbury Science Museum is celebrating **Women in Science** all month!

About the Museum

Bradbury Science Museum is located at 1350 Central Avenue in downtown Los Alamos, New Mexico. Approximately 40 interactive exhibits trace the history of the WWII Manhattan Project, highlight Los Alamos National Laboratory's current and historic research projects related to defense and technology, and focus on Laboratory research related to energy, environment, infrastructure, health and global security concerns.



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